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Described in this report is a survey conducted to acquire detailed information about the number, kinds, and uses of language laboratories in Virginia's public secondary schools. An introductory section discusses the development of a questionnaire, its distribution to school superintendents, and the analysis of the results. The major part of the report consists of six tables of statistical data supplemented by brief analytical summaries of the research findings relevant to (1) types and numbers of facilities, (2) frequency and kinds of usage, (3) names and locations of laboratory directors, and (4) distribution and identification of the various makes of equipment used. A summary of findings is based on statistical information and the responses elicited from teachers, administrators, and supervisors. Also included are an outline of recommendations, a copy of the questionnaire, and a glossary of basic language laboratory terms. (AF)

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THE *Language Laboratory* IN VIRGINIA

A SURVEY REPORT

FL001305

DIVISION OF EDUCATIONAL RESEARCH
STATE DEPARTMENT OF EDUCATION
RICHMOND, VIRGINIA 23216
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FOREWORD

As one of its major responsibilities, the Division of Educational Research and Statistics of the State Department of Education cooperates in the development of studies directed toward educational problems and needs. Studies are conducted by persons in local school divisions, at institutions of higher education, and by members of the Research Division and of other divisions of the State Department of Education.

This study of language laboratories in Virginia public high schools was conducted through the cooperative efforts of the Divisions of Secondary Education and Educational Research and Statistics of the State Department of Education. Miss Helen P. Warriner, Supervisor of Foreign Languages, initiated the study and provided leadership for its development. Staff members of her office and of the Research Division assisted with the preparation of the survey form and with the organization and publication of the final report.

Specific and complete information about the quantity, kinds, and use of language laboratories in Virginia public schools was not readily available. Therefore a survey was conducted to acquire the above information, as well as information concerning the facilities included in laboratories, the frequency of usage, and the number and names of persons designated as laboratory directors. The survey also solicited comments on problems experienced and suggestions for avoiding or solving these problems.

The study is presented in four sections. Section I is a statement of the purpose of the study and an overview of the methods used for data collection. Section II contains a compilation of the data received from the school divisions. Section III is a summary of the findings of the study and of observations of the supervisors in the Department's Foreign Language Service. Section IV contains pertinent recommendations for those interested in foreign language laboratories.

This report should be useful to foreign language teachers and supervisors, to those engaged in training language teachers, and to school administrators, and others interested in the foreign language program of the Virginia public schools.

Section I

INTRODUCTION

The language laboratory is a teaching aid which has been in use in colleges and secondary schools of Virginia and the nation since the late 1950's. Occasionally, the language laboratory is used by elementary schools; this is not true in Virginia, however, except in junior high schools in which seventh-grade students may study a foreign language. This study is concerned with the language laboratory in the public secondary schools of Virginia.

PURPOSE OF THE STUDY

Prior to this study, little accurate information was available about the quantity, kinds, and use of language laboratories in Virginia schools. National Defense Education Act (NDEA) records have provided the only source of data. These data are limited, however, and provide facts related only to the types and brands of laboratories and the number of student positions. They are somewhat unreliable because local administrators either have requested approval for equipment which they have not subsequently purchased or they have installed equipment which is equivalent to, but not identical with, that specified on the application. There was no source of information regarding the use of language laboratories before this study was conducted.

The foreign language supervisors of the Division of Secondary Education are frequently requested to consult with administrators and teachers concerned with the purchase and use of language laboratory equipment. Through their knowledge of NDEA project approvals and their numerous contacts with foreign language teachers, the supervisors have been able to provide subjective information and advice. This advice has been limited, however, by the scope of the supervisors' contacts; and accuracy could not always be guaranteed. As a result, it was decided that a study of the language laboratory in Virginia public secondary schools should be made in order to provide better data and advice for all concerned. A survey was conducted to determine the kinds and types of laboratories, the facilities included in them, the frequency of usage, and the number and names of persons designated as laboratory directors. Also solicited were comments on problems experienced and suggestions for avoiding or solving them.

Whereas little new information can be contributed to the rather voluminous material that has been written about the language laboratory, this summary of its use in Virginia schools is current, complete, and confined to one state. The report also is timely because the laboratory, a tool which was born during the late 1950's and which has experienced many stages of development, has become a much more effective and functional teaching aid; and more schools are installing this equipment.

To a limited extent, this summary of the survey can serve as a guide for school administrators who are considering purchasing new language laboratories, as well as those already possessing them. It does not, however, pretend to be a complete laboratory manual.

PROCEDURES

Questionnaire Development. The questionnaire used in this survey was developed by the foreign language supervisors of the Division of Secondary Education. It was reviewed and revised by two research specialists, one associated with the Division of Research of the Virginia State Department of Education and the other with the School of Education of Indiana University. A replica of the questionnaire is included as Appendix A.

Distribution and Collection. The survey form was distributed to Virginia school superintendents on October 18, 1966. If no laboratories were in use in a school division, it was assumed that the superintendent or some other general administrator completed the questionnaire. If laboratories were available, it was assumed that in most cases language teachers or supervisors responded.

The completed questionnaires represent entire school divisions in some instances and individual schools in others.

Summary and Accuracy of Data and Information. The questionnaires were returned to the Foreign Language Service of the Division of Secondary Education where the information was summarized. Most respondents reported the information clearly and accurately. In a few cases, mistakes were either obvious or were suspected. In such instances members of the Foreign Language Service attempted to seek information from an accurate source. If this were not feasible, they made the corrections themselves, judging to the best of their ability the accurate or most nearly accurate response. The results of the survey, which covers all Virginia secondary schools, can be considered reliable; however, absolute accuracy in all details cannot be guaranteed.

Section II

ANALYSIS OF DATA

A descriptive analysis was conducted in relation to (1) the number and types of laboratories and student positions provided, (2) the types of consoles used in electronic classrooms, (3) the frequency of usage of language laboratories, (4) laboratories used as laboratories only and as classroom-laboratories, (5) laboratory directors, and (6) brands of equipment.

Table I

Number and Types of Laboratories and Student Positions Provided

Table I, pages 9-20, shows the school divisions and schools which have installed language laboratories, the types used, the number of student positions included, and the recording facilities provided for students.

Two hundred twenty-two, or nearly one-half, of Virginia high schools have language laboratories. The majority, or one hundred twenty-one, are booth laboratories which were the first to be marketed on a wide scale. There are 83 electronic classrooms. Only 18 portable laboratories are in use. The majority of laboratories are designed to accommodate 30 students. Most booth-type laboratories provide recording facilities for five or six students. (It should be noted that the nature of most electronic classrooms and portable laboratories does not permit the inclusion of student recorders.) Magnetic tape recorders are more popular than disc recorders.

TABLE I
Number and Types of Laboratories and Student Positions Provided

COUNTIES

DIVISION	High Schools	Intermediate or Junior High Schools	Booth Laboratories	Electronic Classrooms	Portable Laboratories	Total Laboratories	Audio-Active Positions	Recorders in Student Positions	
								Tape	Disc
Arlington	Wakefield		1	3		4	120	6	0
	Washington-Lee		1	3		4	120	6	0
	Yorktown		1	5		6	180	18	0
		Gunston	1	1		2	60	6	0
		Jefferson	2			2	54	12	0
		Kenmore	1	1		2	60	6	0
		Stratford	1	1		2	60	6	0
		Swanson	1	1		2	60	6	0
		Williamsburg	1	2		3	90	6	0
Total			10	17		27			
Augusta	Wilson Memorial		1			1	20	5	0
Total			1			1			
Bedford	Liberty		1			1	30	5	5
	Staunton River		1			1	26	5	0
	Susie G. Gibson			1		1	20	5	0
Total			2	1		3			
Botetourt	James River		1			1	20	5	0
	Lord Botetourt		1			1	20	5	5
		Botetourt	1			1	10	0	1
Total			3			3			

TABLE I—Continued

COUNTIES—CONTINUED

DIVISION	High Schools	Intermediate or Junior High Schools	Booth Laboratories	Electronic Classrooms	Portable Laboratories	Total Laboratories	Audio-Active Positions	RECORDERS IN STUDENT POSITIONS	
								Tape	Disc
Campbell	Brookville			2		2	60	0	0
Total				2		2			
Caroline	Caroline				1	1	27	2	0
	Union				1	1	15	0	0
Total					2	2			
Chesterfield	Huguenot		2			2	36	23	0
	Manchester		1			1	30	18	0
	Matoaca			1		1	23	23	0
	Meadowbrook		1			1	28	18	0
	Thomas Dale				3	3	30	15	0
		Midlothian	1			1	30	20	0
Total			5	1	3	9			
Clarke	Clarke County				1	1	24	1	0
Total					1	1			
Culpeper	Culpeper				1	1	24	0	0
Total					1	1			

Dinwiddie	Dinwiddie			1		1	30	0	0
	Southside			1		1	30	0	0
Total				2		2			
Fairfax	Annandale		1			1	30	0	0
	Edison		1			1	35	5	0
	Fairfax		1			1	30	0	0
	Falls Church		1			1	30	0	0
	Fort Hunt		1			1	35	5	0
	Groveton		1			1	30	0	0
	Herndon		1			1	30	5	0
	Jefferson		1			1	35	5	0
	Langley		1			1	36	0	0
	Robert E. Lee		1			1	30	5	0
	Madison		1			1	30	5	0
	Marshall		1			1	30	5	0
	McLean		1			1	30	0	0
	Mt. Vernon		1			1	30	0	0
	Stuart		1			1	30	1	0
	West Springfield		1			1	36	0	0
	Woodson		1			1	35	4	0
Total			17			17			
Fauquier	Fauquier		1			1	30	6	0
Total			1			1			
Fluvanna	Fluvanna		1			1	20	0	0
	S. C. Abrams		1			1	20	0	0
Total			2			2			
Frederick	James Wood		1			1	32	2	0
Total			1			1			

TABLE I—Continued

DIVISION	High Schools	Intermediate or Junior High Schools	Booth Laboratories	Electronic Classrooms	Portable Laboratories	Total Laboratories	Audio-Active Positions	Recorders in Student Positions	
								Tape	Disc
Gloucester	Thomas C. Walker		1			1	30	0	0
Total			1			1			
Goochland	Central				1	1	8	0	0
	Goochland		1			1	12	12	0
Total			1		1	2			
Greensville	Greensville				2	2	10	1	0
Total					2	2			
Hanover	Lee-Davis		1			1	8	8	0
	Patrick Henry			1		1	30	0	0
Total			1	1		2			
Henrico	Douglas Freeman		1			1	30	6	0
	Hermitage		1			1	30	5	0
	Henrico		1			1	30	5	0
	Highland Springs			1		1	30	5	0
	Tucker		1			1	3	5	3
	Varina		1			1	30	5	0
	Virginia Randolph			1		1	0	0	24
		Brookland	1			1	30	4	0
		Fairfield	1			1	30	6	0
		Tuckahoe		1		1	30	0	30
Total			7	3		10			

Henry	Fieldale-Collinsville			1		1	30	30	30
Total				1		1			
Isle of Wight	Georgie Tyler			1		1	30	5	0
	Smithfield			1		1	30	5	0
	Westside			1		1	30	5	0
	Windsor			1		1	30	5	0
Total				4		4			
King George	King George		1			1	24	0	0
	Ralph Bunche		1			1	24	0	0
Total			2			2			
Lee	Flatwood		1			1	14	4	4
	Pennington		1			1	30	4	4
	Jonesville		1			1	30	0	0
		Dryden	1			1	30	0	0
Total			4			4			
Loudoun	Douglass		1			1	30	0	0
	Loudoun County		1			1	30	0	0
	Loudoun Valley		1			1	30	0	0
Total			3			3			
Lunenburg	Central			1		1	30	0	0
	Lunenburg			1		1	30	0	0
Total				2		2			
Madison	Madison		1			1	18	3	3
Total			1			1			

TABLE I—Continued

COUNTIES—CONTINUED

DIVISION	High Schools	Intermediate or Junior High Schools	Booth Laboratories	Electronic Classrooms	Portable Laboratories	Total Laboratories	Audio-Active Positions	Recorders in Student Positions	
								Tape	Disc
Montgomery	Blacksburg				1	1	15	3	0
Total					1	1			
Nansemond	Forest Glen			1		1	30	0	0
	John F. Kennedy			1		1	30	0	0
	John Yeats			1		1	30	0	0
	Southwestern			1		1	30	0	0
Total				4		4			
Nelson	Nelson County			2		2	20	3	0
Total				2		2			
Pittsylvania	Chatham		1			1	30	12	0
	Dan River		1			1	30	12	0
	Gretna		1			1	30	12	18
	Northside		1			1	24	12	0
	Southside		1			1	30	30	0
	Tunstall		1			1	30	12	0
Total			6			6			
Prince Edward	Robert Moton				1	1	24	6	0
Total					1	1			

Prince George		Prince George			1	1	25	5	0
Total					1	1			
Prince William	Brentsville District			1		1	30	0	0
	Gar-Field		1			1	10	0	0
	Osbourn			1		1	30	0	0
	Stonewall Jackson			1		1	30	0	0
	Woodbridge			1		1	30	0	0
		Fred Lynn		1		1	30	0	0
		Marsteller		1		1	30	0	0
		Parkside		1		1	30	0	0
		Graham Park		1		1	30	0	0
		Rippon		1		1	30	0	0
Total			1	9		10			
Rockingham	Broadway		1			1	29	3	0
	Turner Ashby		1			1	27	3	0
	Montevideo		1			1	24	3	0
Total			3			3			
Southampton	Riverview			1		1	21	0	0
	Southampton			1		1	30	0	0
Total				2		2			
Spotsylvania	Spotsylvania				1	1	30	0	0
Total					1	1			
Stafford	Stafford		1			1	24	0	0
		Stafford	1			1	20	0	0
Total			2			2			

TABLE I—Continued

COUNTIES—CONTINUED

DIVISION	High Schools	Intermediate or Junior High Schools	Booth Laboratories	Electronic Classrooms	Portable Laboratories	Total Laboratories	Audio-Active Positions	RECORDERS IN STUDENT POSITIONS	
								Tape	Disc
Warren	Warren County		1			1	18	18	0
Total			1			1			
York	James W. Johnson		1			1	30	0	30
	York		1			1	30	1	0
Total			2			2			
CITIES									
Alexandria	Francis Hammond		1			1	30	0	0
	George Washington		1			1	24	0	0
	T. C. Williams		2			2	60	0	0
Total			4			4			
Buena Vista	Parry McCluer				1	1			
Total					1	1			
Charlottesville	Lane		1			1	28	6	28
Total			1			1			

Chesapeake	Carver		1	1		1	30	6	28
	Churchland			3		3	90	0	0
	Crestwood			2		2	60	0	0
	Deep Creek					1	30	30	0
	Great Bridge			1		1	35	0	0
	Oscar Smith			1		1	30	0	0
		Indian River		1		1	30	0	0
Total			1	9		10			
Clifton Forge	Clifton Forge				1	1	25	1	0
Total					1	1			
Colonial Heights	Colonial Heights			1		1	30	0	0
Total				1		1			
Danville	George Washington		1			1	15	15	0
	John M. Langston		1			1	10	15	0
Total			2			2			
Falls Church	George Mason		1			1	30	6	0
Total			1			1			
Hampton	Hampton		2			2	60	0	30
	Kecoughtan		1			1	42	0	0
	Phenix		1			1	30	0	15
		Thomas Eaton	1			1	30	0	15
		Benjamin Syms	1			1	30	0	15
		George Wythe	1			1	30	0	15
		H. Wilson Thorpe	1			1	30	0	15
		Jefferson Davis	1			1	30	0	15
		Y. H. Thomas	1			1	30	0	15
Total			10			10			

CITIES—CONTINUED

TABLE I—Continued

DIVISION	High Schools	Intermediate or Junior High Schools	Booth Laboratories	Electronic Classrooms	Portable Laboratories	Total Laboratories	Audio-Active Positions	Recorders in Student Positions	
								Tape	Disc
Harrisonburg	Harrisonburg		1			1	25	5	0
Total			1			1			
Hopewell	Hopewell		1			1	30	5	0
Total			1			1			
Lynchburg	Dunbar		1			1	30	0	30
	E. C. Glass		1			1	30	0	30
		Linkhorne		1		1	24	0	0
		Sandusky		1		1	24	0	0
Total			2	2		4			
Newport News	Denbigh				2	2	60	0	0
	George W. Carver		1			1	30	6	0
	Ferguson		1			1	30	6	0
	Huntington		1			1	30	6	0
	Warwick		1			1	30	6	0
Total			4		2	6			
Norfolk	Granby		1			1	30	10	0
	Maury		1			1	30	10	0
	Norview		1			1	30	10	0
		Jacox		2		2	36	0	0
Total			3	2		5			

Petersburg	Peabody		1			1	30	10	0
	Petersburg		1			1	30	10	0
Total			2			2			
Portsmouth	Cradock		1			1	30	30	0
	I. C. Norcom		1			1	30	30	0
	Woodrow Wilson		1			1	30	30	0
		S. H. Clarke	1			1	30	0	0
		Harry A. Hunt		1		1	30	0	0
		Alf J. Mapp		1		1	30	0	0
		W. E. Waters		1		1	30	0	0
Total			4	3		7			
Richmond	Armstrong		1			1	30	1	0
	George Wythe		1			1	35	35	0
	John Marshall		1			1	35	35	0
	Maggie Walker		1			1	30	1	0
	Thomas Jefferson		1			1	30	30	0
Total			5			5			
Suffolk	Booker T. Washington		1			1	15	6	0
	Suffolk		1			1	36	6	0
Total			2			2			
Virginia Beach	Bayside			2		2	30	0	0
	First Colonial			2		2	30		
	Floyd Kellam			2		2	30	0	0
	Frank W. Cox			2		2	30	0	0
	Princess Anne			2		2	30	0	0
	Union Kempsville			1		1	30	0	0
		Virginia Beach		1		1	30	0	0
Total				12		12			

TABLE I—Continued

CITIES—CONTINUED

DIVISION	High Schools	Intermediate or Junior High Schools	Booth Laboratories	Electronic Classrooms	Portable Laboratories	Total Laboratories	Audio-Active Positions	Recorders in Student Position	
								Tape	Disc
Williamsburg	James Blair Berkeley			2 1		2 1	58 30	0 0	0 0
Total				3		3			
Winchester	Handley		1			1	24	0	0
Total			1			1			
Grand Total	151	34	121	83	18	222			

Table II

Types of Consoles Used in Electronic Classrooms

Table II, page 22, shows the types of consoles used in electronic classrooms.

Portable consoles are more prevalent than stationary consoles in electronic classrooms.[1]

[1]Section III, p. 45.

TABLE II
Type of Consoles Used in Electronic Classrooms

COUNTIES

DIVISION	Number of Electronic Classrooms	Portable Console	Stationary Console
Arlington	17	12	5
Bedford	1	1	
Campbell	2	2	
Chesterfield	1	1	
Dinwiddie	2		2
Hanover	1	1	
Henrico	6		6
Henry	1		1
Isle of Wight	4	4	
Lunenburg	2		2
Nansemond	4		4
Nelson	2	2	
Prince William	9	9	
Southampton	2		2
Spotsylvania	1	1	
Total	55	33	22

CITIES

Chesapeake	9	8	1
Colonial Heights	1		1
Lynchburg	2		2
Newport News	2	2	
Norfolk	2	2	
Portsmouth	3		3
Virginia Beach	12	12	
Williamsburg	3	3	
Total	34	27	7
Grand Total	89	60	29

Table III

Frequency of Usage of Laboratories

Table III, pages 24 through 27, shows the frequency with which language laboratories are used.

One hundred sixty-nine of the schools having laboratories answered the question on usage in a manner which could be interpreted and recorded. In 111 of these schools, the laboratory was reported to be used at least once during each day of the week. In 58 other schools the laboratory is used rarely or not more than twice a week.[2]

---

[2]Section III, p. 48.

TABLE III
Frequency of Usage of Laboratories

COUNTIES

DIVISION	School	Frequency			
		Daily	Twice a Week	Weekly	Rarely
Arlington	Wakefield	x			
	Washington-Lee	x			
	Yorktown	x			
	Gunston Jr.	x			
	Jefferson Jr.	x			
	Kenmore Jr.	x			
	Stratford Jr.	x			
	Swanson Jr.	x			
	Williamsburg	x			
Augusta	Wilson Memorial	x			
Bedford	Liberty		x		
	Staunton River		x		
	Susie G. Gibson				
Botetourt	James River	x			
	Lord Botetourt	x			
Campbell	Brookville			x	
	William Campbell		x		
Caroline	Caroline			x	
	Union			x	
Chesterfield	Huguenot			x	
	Manchester	x			
	Matoaca			x	
	Meadowbrook				x
	Thomas Dale		x		
	Midlothian Jr.	x			
Clarke	Clarke County	x			
Culpeper	Culpeper	x			
Dinwiddie	Dinwiddie		x		
	Southside			x	
Fairfax	Annandale	x			
	Edison	x			
	Falls Church	x			
	Groveton	x			
	Jefferson	x			
	Langley	x			
	Robert E. Lee	x			
	Madison	x			
	Marshall	x			
	McLean	x			
	Mt. Vernon	x			
	Stuart	x			

TABLE III—Continued

COUNTIES—CONTINUED

DIVISION	School	FREQUENCY			
		Daily	Twice a Week	Weekly	Rarely
	West Springfield	x			
	Woodson	x			
	Herndon	x			
Fauquier	Fauquier	x			
Fluvanna	Fluvanna County				x
	S. C. Abrams				x
Frederick	James Wood	x			
Gloucester	Thomas C. Walker			x	
Goochland	Central High			x	
	Goochland			x	
Greensville	Greensville				x
Hanover	Lee-Davis			x	
	Patrick Henry			x	
Henrico	Douglas Freeman				x
	Henrico	x			
	Hermitage	x			
	Highland Springs			x	
	Brookland Jr.	x			
	Fairfield Jr.		x		
	Tuckahoe Jr.				
	Tucker			x	
	Varina			x	
	Virginia Randolph			x	
Henry	Fieldale-Collinsville			x	
Isle of Wight	Georgie Tyler	x			
	Smithfield	x			
	Westside	x			
	Windsor	x			
King George	King George			x	
	Ralph Bunche			x	
Lee	Flatwoods	x			
	Pennington	x			
	Jonesville	x			
Loudoun	Douglass	x			
	Loudoun County			x	
	Loudoun Valley				x
Lunenburg	Central	x			
	Lunenburg	x			
Madison	Madison	x			

TABLE III—Continued

COUNTIES—CONTINUED

DIVISION	School	FREQUENCY			
		Daily	Twice a Week	Weekly	Rarely
Montgomery	Blacksburg		x		
Nansemond	Forest Glen	x			
	John F. Kennedy	x			
	John Yeats			x	
	Southwestern	x			
Nelson	Nelson County	x			
Pittsylvania	Chatham	x			
	Dan River	x			
	Gretna	x			
	Northside			x	
	Southside	x			
	Tunstall	x			
Prince Edward	R. R. Moton	x			
Prince George	Prince George	x			
Prince William	Brentsville District	x			
	Gar-Field				x
	Osbourn	x			
	Stonewall Jackson	x			
	Woodbridge	x			
	Fred Lynn Jr.	x			
	Marsteller Jr.	x			
	Parkside Jr.	x			
	Graham Park Jr.	x			
	Rippon Jr.	x			
Rockingham	Broadway	x			
	Turner Ashby	x			
	Montevideo	x			
Southampton	Riverview			x	
	Southampton				
Spotsylvania	Spotsylvania		x		
Stafford	Stafford Sr.		x		
	Stafford Jr.				x
Warren	Warren County				
York	James W. Johnson	x			
	York	x			
Total Counties		72	9	22	8

TABLE III—Continued

CITIES

DIVISION	School	Frequency			
		Daily	Twice a Week	Weekly	Rarely
Alexandria	Francis Hammond	X			
	George Washington	X			
	T. C. Williams	X			
Charlottesville	Lane	X			
Chesapeake	Carver	X			
	Churchland	X			
	Crestwood	X			
	Deep Creek	X			
	Great Bridge	X			
	Oscar Smith	X			
	Indian River Jr.	X			
Clifton Forge	Clifton Forge	X			
Colonial Heights	Colonial Heights	X			
Danville	George Washington				X
	John M. Langston				X
Falls Church	George Mason	X			
Hampton	Hampton				X
	Kecoughtan				X
	Phenix				X
	Benjamin Syms Jr.			X	
	George Wythe Jr.			X	
	H. Wilson Thorpe Jr.				X
	Jefferson Davis Jr.			X	
	Thomas Eaton Jr.			X	
	Y. H. Thomas Jr.			X	
Harrisonburg	Harrisonburg	X			
Hopewell	Hopewell			X	
Lynchburg	Dunbar	X			
	E. C. Glass	X			
	Linkhorne Jr.	X			
	Sandusky Jr.	X			
Newport News	Denbigh	X			
	George W. Carver	X			
	Ferguson				X
	Huntington	X			
	Warwick	X			
Norfolk	Granby	X			
	Maury	X			
	Norview			X	
	Jacox Jr.			X	

TABLE III—Continued

CITIES—CONTINUED

DIVISION	School	FREQUENCY			
		Daily	Twice a Week	Weekly	Rarely
Petersburg	Peabody	x			
	Petersburg	x			
Portsmouth	Cradock				
	I. C. Norcom				
	Woodrow Wilson				
	S. H. Clarke Jr.				
	Harry A. Hunt Jr.				
	Alf J. Mapp Jr.				
	W. E. Waters Jr.				
Richmond	Armstrong	x			
	George Wythe		x		
	John Marshall		x		
	Maggie L. Walker	x			
	Thomas Jefferson		x		
Suffolk	Booker T. Washington		x		
	Suffolk	x			
Virginia Beach	Bayside	x			
	Floyd Kellam	x			
	Frank W. Cox	x			
	Princess Anne	x			
	Union Kempsville	x			
	Virginia Beach Jr.	x			
Williamsburg	James Blair	x			
	Berkeley	x			
Winchester	Handley	x			
Total Cities		39	4	8	7
Grand Total		111	13	30	15

Table IV

Laboratories Used as Laboratories Only and as Classroom-Laboratories

Table IV, pages 30 through 34, indicates whether laboratories are used as laboratories only, or as combined classroom-laboratories.

This table indicates that more language laboratories are used exclusively for laboratory purposes than are used as laboratories and as classrooms. When this table is compared with Table I (pages 9 through 20), it is obvious that most laboratories which serve also as classrooms are electronic classrooms designed for dual usage. Few booth laboratories are used for non-laboratory purposes.

TABLE IV

Laboratories Used as Laboratories Only and as Classroom-Laboratories

COUNTIES

DIVISION	High School	Intermediate or Junior High	Laboratory Only	Laboratory Classroom
Arlington	Wakefield		x	
	Washington-Lee		x	
	Yorktown		x	
		Gunston	x	
		Jefferson	x	
		Kenmore	x	
		Stratford	x	
		Swanson	x	
		Williamsburg	x	
Augusta	Wilson Memorial		x	
Bedford	Liberty		x	
	Staunton River		x	
	Susie G. Gibson		x	
Botetourt	James River			x
	Lord Botetourt			x
Campbell	Brookville			x
Caroline	Caroline			x
	Union		x	
Chesterfield	Huguenot			x
	Manchester			x
	Matoaca			x
	Meadowbrook		x	
	Thomas Dale			x
		Midlothian	x	
Clarke	Clarke County		x	
Culpeper	Culpeper			x
Dinwiddie	Dinwiddie		x	
	Southside		x	
Fairfax	Annandale		x	
	Edison		x	
	Fairfax		x	
	Falls Church		x	
	Groveton		x	
	Jefferson		x	
	Langley		x	
	Robert E. Lee		x	
	Madison		x	
	Marshall		x	
	McLean		x	
	Mt. Vernon		x	
	Stuart		x	

TABLE IV—Continued

COUNTIES—CONTINUED

DIVISION	High School	Intermediate or Junior High	Laboratory Only	Laboratory Classroom
	West Springfield		x	
	Woodson		x	
	Herndon		x	
Fauquier	Fauquier			x
Fluvanna	Fluvanna			x
	S. C. Abrams			x
Frederick	James Wood		x	
Gloucester	Thomas C. Walker			x
Goochland	Central			x
	Goochland			x
Greensville	Greensville		x	
Hanover	Lee-Davis		x	
	Patrick Henry			x
Henrico	Douglas Freeman			x
	Henrico		x	
	Hermitage		x	
	Highland Springs		x	
	Varina		x	
		Brookland	x	
		Fairfield	x	
		Tuckahoe	x	
		Tucker	x	
		Virginia Randolph	x	
Henry	Fieldale-Collinsville			x
Isle of Wight	Georgie Tyler			x
	Smithfield			x
	Westside			x
	Windsor			x
King George	King George		x	
	Ralph Bunche			x
Lee	Flatwoods			x
	Pennington			x
	Jonesville			x
		Dryden		x
Loudoun	Douglass		x	
	Loudoun County			
	Loudoun Valley			x
Lunenburg	Central			x
	Lunenburg			x
Madison	Madison		x	

TABLE IV—Continued

COUNTIES—CONTINUED

DIVISION	High School	Intermediate or Junior High	Laboratory Only	Laboratory Classroom
Montgomery	Blacksburg			x
Nansemond	Forest Glen			x
	John F. Kennedy			x
	Southwestern			x
	John Yeats			x
Nelson	Nelson County		x	
Pittsylvania	Chatham		x	
	Dan River			x
	Gretna		x	
	Northside			x
	Southside		x	
	Tunstall			x
Prince Edward	R. R. Moton		x	
Prince George	Prince George County			x
Prince William	Brentsville District			x
	Gar-Field			x
	Osbourn			x
	Stonewall Jackson			x
	Woodbridge			x
		Fred Lynn		x
		Marsteller		x
		Parkside		x
		Graham Park		x
		Rippon		x
Rockingham	Broadway		x	
	Turner Ashby			x
		Montevideo	x	
Southampton	Riverview			x
	Southampton			x
Spotsylvania	Spotsylvania		x	
Stafford	Stafford			x
		Stafford	x	
Warren	Warren County			x
York	James W. Johnson			x
	York			x
Total Counties			59	56

TABLE IV—Continued

CITIES

DIVISION	High School	Intermediate or Junior High	Laboratory Only	Laboratory Classroom
Alexandria	Francis Hammond		x	
	George Washington		x	
	T. C. Williams		x	
Charlottesville	Lane			x
Chesapeake	Carver			x
	Churchland			x
	Crestwood			x
	Deep Creek			x
	Great Bridge			x
	Oscar Smith			x
		Indian River		x
Clifton Forge	Clifton Forge		x	
Colonial Heights	Colonial Heights		x	
Danville	George Washington			x
	John M. Langston			x
Falls Church	George Mason		x	
Hampton	Hampton		x	
	Kecoughtan			x
	Phenix			x
		Jefferson Davis		x
		Thomas Eaton		x
		Benj. Syms		x
		Y. H. Thomas	x	
		H. Wilson Thorpe		x
		George Wythe	x	
Harrisonburg	Harrisonburg			x
Hopewell	Hopewell			x
Lynchburg	Dunbar		x	
	E. C. Glass		x	
		Linkhorne	x	
		Sandusky	x	
Newport News	Denbigh		x	
	George W. Carver		x	
	Ferguson		x	
	Huntington		x	
	Warwick		x	
Norfolk	Granby		x	
	Maury		x	
	Norview		x	
		Jacox		
Petersburg	Peabody			x
	Petersburg		x	

TABLE IV—Continued

CITIES—CONTINUED

DIVISION	High School	Intermediate or Junior High	Laboratory Only	Laboratory Classroom
Portsmouth	Cradock		x	
	I. C. Norcom		x	
	Woodrow Wilson		x	
		S. H. Clarke		
		Harry A. Hunt		
		Alf J. Mapp		
		W. E. Waters		
Richmond	Armstrong		x	
	Thomas Jefferson		x	
	John Marshall		x	
	Maggie Walker		x	
	George Wythe		x	
Suffolk	Booker T. Washington		x	
	Suffolk		x	
Virginia Beach	Bayside		x	
	Frank W. Cox		x	
	Floyd Kellam		x	
	Princess Anne		x	
	Union Kempsville		x	
		Virginia Beach	x	
Williamsburg	James Blair			x
	Berkeley		x	
Winchester	Handley		x	
Total Cities			39	21
Grand Total			98	77

Table V

Laboratory Directors

Table V, pages 36 through 40, indicates whether or not laboratory directors have been designated to assume responsibilities for the use and/or administration of the equipment.

Approximately two-thirds of the schools possessing language laboratories have designated someone as laboratory director. The director is usually a language teacher.[3]

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[3]Section III, p. 44.
Section IV, p. 51.

TABLE V

Laboratory Directors

COUNTIES

DIVISION	High School	Intermediate or Junior High	Yes	No
Arlington	Wakefield		x	
	Washington-Lee		x	
	Yorktown		x	
		Gunston	x	
		Jefferson	x	
		Kenmore	x	
		Stratford	x	
		Swanson	x	
		Williamsburg	x	
Augusta	Wilson Memorial		x	
Bedford	Liberty		x	
	Staunton River		x	
	Susie G. Gibson		x	
Botetourt	James River		x	
	Lord Botetourt		x	
Campbell	Brookville			x
Caroline	Caroline		x	
	Union		x	
Chesterfield	Huguenot			x
	Manchester		x	
	Matoaca		x	
	Meadowbrook		x	
	Thomas Dale			x
		Midlothian	x	
Clarke	Clarke County		x	
Culpeper	Culpeper		x	
Dinwiddie	Dinwiddie		x	
	Southside		x	
Fairfax	Annandale		x	
	Edison		x	
	Fairfax		x	
	Falls Church		x	
	Groveton		x	
	Jefferson		x	
	Langley		x	
	Robert E. Lee		x	
	Madison		x	
	Marshall		x	
	McLean		x	
	Mt. Vernon		x	
	Stuart		x	
	West Springfield		x	
	Woodson		x	
	Herndon		x	

TABLE V—Continued

COUNTIES—CONTINUED

DIVISION	High School	Intermediate or Junior High	Yes	No
Fauquier	Fauquier		x	
Fluvanna	Fluvanna County			x
	S. C. Abrams			x
Frederick	James Wood		x	
Gloucester	Thomas C. Walker			x
Goochland	Central		x	
	Goochland		x	
Greensville	Greensville County		x	
Hanover	Lee-Davis			x
	Patrick Henry		x	
Henrico	Douglas Freeman		x	
	Henrico		x	
	Hermitage		x	
	Highland Springs		x	
	Varina		x	
		Brookland	x	
		Fairfield		
		Tuckahoe		
		Tucker	x	
Henry	Fieldale-Collinsville			x
Isle of Wight	Georgie Tyler		x	
	Smithfield		x	
	Westside		x	
	Windsor		x	
King George	King George			x
	Ralph Bunche			x
Lee	Flatwoods		x	
	Pennington		x	
	Jonesville			x
Loudoun	Douglass		x	
	Loudoun County			
	Loudoun Valley			x
Lunenburg	Central		x	
	Lunenburg			
Madison	Madison		x	
Montgomery	Blacksburg		x	
Nansemond	Forest Glen			x
	John F. Kennedy			x
	John Yeats			
	Southwestern			

TABLE V—Continued

COUNTIES—CONTINUED

DIVISION	High School	Intermediate or Junior High	Yes	No
Nelson	Nelson County			x
Pittsylvania	Chatham		x	
	Dan River			x
	Gretna		x	
	Northside		x	
	Southside		x	
	Tunstall			x
Prince Edward	R. R. Moton		x	
Prince George	Prince George		x	
Prince William	Brentsville District		x	
	Gar-Field		x	
	Osbourn		x	
	Stonewall Jackson		x	
	Woodbridge		x	
		Fred Lynn	x	
		Marsteller	x	
		Parkside	x	
		Graham Park	x	
		Rippon	x	
Rockingham	Broadway		x	
	Turner Ashby			x
	Montevideo		x	
Southampton	Riverview		x	
	Southampton		x	
Spotsylvania	Spotsylvania			x
Stafford	Stafford			x
		Stafford		x
Warren	Warren County			x
York	James W. Johnson		x	
	York		x	
Total Counties			86	22

TABLE V—Continued

CITIES

DIVISION	High School	Intermediate or Junior High	Yes	No
Alexandria	Francis Hammond		x	
	George Washington		x	
	T. C. Williams			x
Charlottesville	Lane		x	
Chesapeake	Carver			x
	Churchland			x
	Crestwood			x
	Deep Creek			x
	Great Bridge			x
	Oscar Smith			x
		Indian River		x
Clifton Forge	Clifton Forge		x	
Colonial Heights	Colonial Heights		x	
Danville	George Washington			x
	John M. Langston			x
Falls Church	George Mason			x
Hampton	Hampton			x
	Kecoughtan		x	
	Phenix		x	
		Jefferson Davis	x	
		Thomas Eaton	x	
		Benjamin Syms		x
		Y. H. Thomas	x	
		H. Wilson Thorpe		x
		George Wythe	x	
Harrisonburg	Harrisonburg			x
Hopewell	Hopewell			x
Lynchburg	Dunbar		x	
	E. C. Glass		x	
		Linkhorne	x	
		Sandusky	x	
Newport News	Denbigh		x	
	George W. Carver		x	
	Ferguson		x	
	Huntington		x	
	Warwick		x	
Norfolk	Granby		x	
	Maury		x	
	Norview		x	
		Jacox		
Petersburg	Peabody			x
	Petersburg			x

TABLE V—Continued

CITIES—CONTINUED

DIVISION	High School	Intermediate or Junior High	Yes	No
Portsmouth	Cradock			
	I. C. Norcom			
	Woodrow Wilson			
		S. H. Clarke		
		Harry A. Hunt		
		Alf J. Mapp		
		W. E. Waters		
Richmond	Armstrong			x
	George Wythe			x
	John Marshall			x
	Maggie Walker			x
	Thomas Jefferson			x
Suffolk	Booker T. Washington		x	
	Suffolk			x
Virginia Beach	Bayside		x	
	Floyd Kellam		x	
	Frank W. Cox		x	
	Princess Anne		x	
	Union Kempsville		x	
		Virginia Beach	x	
Williamsburg	Berkeley			
	James Blair			x
Winchester	Handley			x
Total Cities			30	26
Grand Total			116	48

Table VI

Brands of Equipment

Table VI, page 42, shows the distribution of the various brands of equipment used for foreign language instruction in Virginia public secondary schools.

TABLE VI
Brands of Equipment

BRAND (Headquarters Address)	No.
1. Aero-tronics Education Service Div. AERO Service Corp. 210 East Courtland Philadelphia 20, Pa.	1
2. American Seating American Seating Co. Ninth and Broadway Grand Rapids 2, Mich.	4
3. Bell and Howell Bell and Howell Co. 7100 McCormick Road Chicago, Ill. 60645	2
4. Califone Rheem Califone Corp. 5922 Bowcroft St. Los Angeles 16, Calif.	20
5. Dage-Bell (TRW, Magnetic-con) Dage-Bell Corporation 455 Sheridan Ave. Michigan City, Ind. 46360	91
6. Dictalab Dictaphone Corporation Executive Office 730 Third Ave. New York 17, N. Y.	2
7. Dukane Dukane Corporation St. Charles, Ill.	1
8. EDU-tronics EDU-tronics, Inc. 459 Broadway Hicksville, N. Y. 11802	6
9. EFI Electronic Futures, Inc. 57 Dodge Ave. North Haven, Conn. 06473	9
10. Hamilton Hamilton Manuf. Co. Two Rivers, Wisc.	1
11. Instructomatic Instructomatic Incorp. 23241 Fenkell Ave. Detroit, Mich. 48226	13
12. Monitor Electronic Teaching Labs. 5034 Wisconsin Ave., N.W. Washington, D. C. 20016	13
13. RCA Radio Corp. of America, Inc. 760 Ramsey Ave. Hillside, N. J. 07205	20
14. Scribe Scribe International, Inc. 3166 Des Plaines Ave. Des Plaines, Ill. 60018	3
15. Science Electronics Science Electronics, Inc. 1085 Commonwealth Ave. Boston, Mass. 02215	2
16. Switchcraft Switchcraft, Inc. 5555 N. Elston Ave. Chicago, Ill. 60630	1
17. Viking Division of Telex 9600 Aldrich Ave., So. Minneapolis, Minn. 55420	4
18. Virginia Sound Systems Arlington, Va.	2
19. Vocalette	1
20. Webster Webster Electronic Co. 1900 Clark St. Racine, Wisc. 53403	8
Total	202

Section III

FINDINGS AND OBSERVATIONS

This section is based on:

1. Statistical information found in Section II.
2. Subjective information elicited from the responses to questions 5 and 6 of the questionnaire.[4]
3. Opinions of the foreign language supervisors of the Division of Secondary Education.

All remarks and recommendations which are the opinions of the supervisors, rather than the direct results of the survey, are italicized.

The majority of foreign language teachers and school administrators have had limited experience with language laboratories, even though they might have been using them for several years. The experience of most of those who replied is confined to one or two types or brands of equipment and to a like number of laboratory schedules, sets of tapes, and other circumstances which affect the results of laboratory usage. Some, because of poor equipment, inappropriate teaching materials, inadequate knowledge of foreign language teaching methodology, or other limiting factors, have not had a fair opportunity to assess accurately the contributions or problems of the laboratory. Therefore, two initial conclusions seem obvious:

1. All foreign language teachers and all administrators interested in acquiring or using laboratories can profit from this study which incorporates the comprehensive experience of many educators.
2. Whereas all opinions appearing more than one time as answers to questions five and six have been summarized, some are believed to be inaccurate. In these cases the supervisors have attempted to provide a broader perspective for the problem; and, as noted previously, their opinions are italicized.

The responses to questions five and six have been evaluated and assigned to what is judged to be the most appropriate category of an effectiveness-of-usage scale. Whereas the researchers' judgment is involved, it is believed that their conclusions are accurate. The completed scale follows:

---

[4]Question 5—"Do you have any comments concerning your laboratories? In particular, we would be interested in any problems you have had with your equipment, any reasons for being satisfied with it, or a statement concerning the effect on your language program."
Question 6—"Would you have any advice to offer to others who might be considering the installation of a language lab?"

Very effective	11
Effective	19
Moderately effective	20
Ineffective	8
No comments	8
Comments inconclusive	3

NOTE: Numbers represent school divisions rather than individual schools.

Question five of the questionnaire refers to problems experienced with language laboratories, and question six requests advice which may help others avoid the same difficulties. These problems are summarized in the approximate order of the frequency in which they appeared. Paralleling the statement of a given problem is the subsequent advice which was offered by the respondents and that offered by the foreign language staff.

The research confirms what most laboratory users have always known: there are many problems. It is encouraging, on the other hand, to learn that in spite of the problems, the large majority of respondents think that the laboratory has enhanced their language program, at least to some degree.

1. *Maintenance.* Unquestionably, the most frequent source of difficulty is failure of equipment; more than one-half of those using laboratories gave this as a primary problem. A majority of respondents indicated that the most obvious solution to this problem is the ready availability of good maintenance service. Some respondents indicated that the company supplying the service should be located nearby. *The foreign language supervisors believe, however, that to give priority to the availability of maintenance service at the expense of all other factors is not always the best solution, nor is it a feasible one for schools located in remote areas. Some schools have received good service from distantly located companies, and apparently have experienced no problems which would have been reported on the questionnaire. The foreign language staff believes that it is of primary importance for the school to have a written service contract with a reputable company or individual, preferably with the seller, or at least with one who is capable of repairing language laboratories. Promptness of service, basic costs, periodic checks and repairs, emergency calls, availability of parts, etc., should be provided for in the service contracts.*

   Another observation which the respondents made is that often there are no clear lines of responsibility within the school system for providing repair service. *A laboratory director, who may also be a teacher, can be of great assistance in this and other matters. The supervisors believe, however, that the responsibilities of many laboratory directors are so limited or vague as to cause inefficiency or ineffectiveness in the implementation of their tasks. The teacher should be responsible initially for reporting problems; and someone else, e.g., the laboratory director, the principal, a supervisor, or other administrator, should be responsible for contacting the repairman immediately. The teacher needs to have a nearly flawless system for detecting laboratory problems that occur*

during his classes. There are several means of achieving this; for instance, a reliable student can often be called upon to assist in making routine checks after a class has completed use of the laboratory.

The supervisors have observed, and teachers frequently report, that headsets and microphones are the components which most often fail. These items are relatively inexpensive when compared to the total cost of the laboratory. In a 30-position laboratory, at least six extra headsets should be kept on hand. It is desirable to see that in all new installations the plug-in type of microphone and/or headset be used to provide for easy and more economical servicing.

Another means of preventing certain mechanical failures is to make periodic checks to locate and tighten loose screws.

Before any class uses the language laboratory for the first time, the teacher should instruct the students about the purposes and procedures of laboratory work. Students should clearly understand the contribution that laboratory practice makes to their learning of a foreign language, and they should be aware of their responsibility for maintaining the equipment.

Good maintenance, however, was not the only recommendation given as a solution to the problems of mechanical failures. Some respondents suggested that much research be done before a laboratory is purchased. Others indicated that teachers, particularly those having experience with language laboratories, and State Department of Education personnel be consulted. One respondent said that salesmen should not be heeded. *The foreign language supervisors have the following suggestion concerning salesmen's advice: Teachers and administrators should do enough research to learn the pertinent questions to ask salesmen. They should then present these questions to the salesmen and insist on factual answers.*

The most frequent recommendation was that the electronic classroom be considered in lieu of the booth-type laboratory. Four respondents stressed the importance of simplicity of the laboratory design. *The supervisors agree with both of these recommendations. Since the electronic classroom has become readily available, it has been installed almost to the exclusion of the booth laboratory. It will probably soon surpass the booth laboratory in quantity. The electronic classroom is less costly, simpler to operate, has fewer parts that can fail, and is easier to service. The booth-type laboratory obscures all or most of the students from the teacher, regardless of the type of construction used in the booth; because of this, students often tamper with wires and screws and cause the equipment to fail. The console in the electronic classroom may be portable or stationary, although the portable console is more widely used because it can be shared easily by two classrooms.* Physical and psychological isolation also become problems in booth laboratories; three respondents stated that the booths "get in the way." *Heavy duty, padded headset-microphone combinations in electronic classrooms supplant the need for*

the booth. The electronic classroom provides all of the functions of the booth laboratory, except that individual students cannot record their voices. In spite of this limitation, the results of the survey and the opinion of the supervisors indicate that the electronic classroom is far more practical than the booth laboratory for general high school use. The supervisors believe, however, that schools having extensive language offerings can utilize a booth-type laboratory with recording facilities within each booth as an excellent complement to the electronic classrooms.

A recommendation which was made concerning the care of equipment in booth-type laboratories was that the laboratory should not be used for general classroom instruction, especially not by other departments or study hall groups. *Laboratories should be used only as laboratories and by people who know how to administer them. Furthermore, a booth laboratory does not provide a setting that is conducive to general instruction because mobility within the room is diminished and classroom vision is obscured.*

Two respondents using electronic classrooms said they prefer the booth-type laboratories because of the recording facilities. *If recording facilities are deemed indispensable, it is advisable to include tape or disc recorders in each booth. When only a few recorders are included, most teachers find it impractical and, in many cases instructionally undesirable, to have one section of the class on one type of activity while another does something else. It is rare that supervisors have seen recording facilities in use in booth laboratories The booth laboratory, therefore, almost inevitably becomes only an audio-active laboratory which is no more than the electronic classroom. The supervisors believe that, although recording facilities can be an asset, they are not necessary for secondary school foreign language work.*

2. *Teacher training.* Many respondents emphasized the importance of the teacher's role in laboratory usage. One of the most significant remarks to appear on the questionnaires was from a large city system having several high schools and many language teachers: "The equipment has been highly satisfactory. . . . The effectiveness, however, is a product of teacher interest and enthusiasm rather than of the equipment; and we have had both excellent and poor results." Many other comments were directed specifically to the training of the teacher. *The foreign language supervisors believe that lack of training is the root of many laboratory problems. It should be understood that the training referred to is not only the knowledge of how to manipulate the switches and buttons, but is an understanding of the basic techniques of instruction that must be employed to make laboratory work contribute to successful total language instruction. Experienced teachers must be willing to recognize that there might be a different and even a better way of doing things than that to which they are accustomed, and they also must be willing to find the time to catch up and keep up with developments in the field. State and local educational agencies*

are obligated to provide in-service opportunities of many types for teachers and must encourage them in their efforts toward this end. Colleges, too, have a responsibility to those already in the profession as well as to those whom they are training.

3. *Teaching materials.* Several respondents attributed their language laboratory difficulties, or at least a significant portion of them, to teaching materials that were either inadequate or of poor quality. *The supervisors have observed a critical problem in this regard. In some cases the authors of textbooks have not provided tapes; in others the taped materials are of poor quality. Some administrators have not purchased tapes for their teachers. In some school divisions, the system of supply and distribution of materials is inefficient. Delay and confusion result when laboratory tapes are shared by too many teachers.*

4. *Portable laboratory.* A majority of users said that the portable language laboratory was unsatisfactory. Only 16 installations of this type are found in Virginia schools. To set up and take down the portable laboratory each time it is used is time consuming. This type of installation is susceptible to frequent mechanical failure because of the constant handling of wires, jacks, switches, neadsets, etc. An additional handicap arises because most portable laboratories are limited to use by only a portion of the class.

5. *Location of the laboratory.* Two school systems reported that problems were caused by the improper location of the laboratory. The laboratory should be located contiguous to or among the language classrooms. Occasionally, however, this is not done; and, as a consequence, time is wasted, there is undue traffic in the halls, and the laboratory is seldom used.

6. *Wireless laboratories.* Few schools have installed wireless laboratories, but one respondent criticized this type because the teacher cannot readily and quickly monitor individual students from the console. *Teachers and administrators should, therefore, weigh the importance of this function for their own purposes before purchasing equipment.* Other criticisms included the weight of the headsets (because of the built-in battery unit) and the amount of time required to set up and take down equipment before and after each period of use. *When wireless equipment is used, an annual budget must be provided for the purchase of batteries so that laboratory operation is not limited or halted by battery failure.*

7. *Scheduling.* One respondent indicated that the teachers needed a better system of laboratory scheduling. *The foreign language supervisors, also believe that most laboratories which are shared by several teachers could be better utilized if an improved system of scheduling were employed. Such a system should be organized so that each teacher might have access to the laboratory at specified times of the week. On the other hand, the system should be some-*

what flexible so that a teacher not needing the laboratory during his assigned period could easily release it to another who does. A chart with some type of "in-use," "not-in-use" signaling system serves quite effectively for this purpose.

Many factors, such as the number of teachers and students sharing the laboratory, promptness of repairs, and the scheduling system, determine the frequency and the length of time that a laboratory is available to a class. The level of the class, the purpose of the lesson, and other conditions determine the length of time necessary for a laboratory session. Frequent laboratory periods of short duration are preferable to longer, but less frequent, sessions. It appears from the results of the survey that many teachers use the laboratory so infrequently that the benefits diminish.

Two respondents desired some method for making the laboratory available to students before and after school hours and during study halls. *This is desirable but not often feasible. Additional supervision is necessary to help with the operation of equipment, selection of materials to be used, discipline of the students, etc. If the laboratory is used by individual students during school hours, it is often necessary to provide facilities, in addition to the main laboratory, to avoid interrupting activities in the regular classes.*

8. *Monitoring.* Monitoring was not mentioned by any of the respondents, except those using wireless equipment; however, *the supervisors believe that a comment should be made on this subject. Practically all laboratories have this facility, and in most it is quite easy to tune in on individual students and talk with them. The majority of teachers do tune in, but few seem to make comments to the students. Teachers can easily correct students and should do so; they should also encourage them, compliment them, or say whatever needs to be said. In other words, the teacher is still the teacher; he is not cut off when the equipment is switched on. Students should not be "turned over to the laboratory." They need to know, subtly but firmly, that the teacher is still in command.*

9. *Student laboratory decorum. Student behavior must be under control at all times. The classroom atmosphere should be relaxed enough to dispel tension and sufficiently restrained to create a seriousness of purpose concerning the lesson. Special attention should be given to preventing the inadvertent or intentional tampering with the equipment.*

Conclusions

The results of this survey, along with evidence from many other sources, illustrate the contribution of the language laboratory to foreign language teaching. At the same time, the many problems that prevail in the use of the language laboratory are obvious, but it must be remembered that the laboratory is a teaching tool, not a teacher, not a panacea. It must be remembered too that the laboratory came into being as part of a revolution

taking place in teaching methodology and materials, and the conditions surrounding its very nascence were therefore not ideal. Through the process of its evolution it has nevertheless become a simpler, more economical and more effective teaching aid; but its full potential is not yet reached. As the equipment itself is further refined, better teaching materials are produced, and teachers become more competent in teaching all of the skills that comprise language, the laboratory will perhaps become as basic to foreign language instruction as the biology laboratory is to the biology class.

Section IV

RECOMMENDATIONS

The recommendations resulting from the foregoing statistical information, from the comments of the administrators and teachers who completed the questionnaire, and from the experience of the foreign language supervisors of the Division of Secondary Education are summarized in this section. This summary is intended to serve as a quick-reference guide for those who purchase, use, or are otherwise interested in language laboratories. It does not pretend to be comprehensive; rather it is related to those aspects of language laboratories and laboratory usage which were dealt with in the study. The section on use is obviously incomplete; it is anticipated that this topic will be covered in greater depth in the foreign language curriculum guide which is scheduled for publication by the State Department of Education in the fall of 1968.

I. Acquisition

A. Much research must be done before purchasing. This can best be accomplished by:

1. Reading professional journals and publications,
2. Reviewing pertinent research studies,
3. Consulting other teachers and educators,
4. Consulting the foreign language staff of the State Department of Education,
5. Visiting other schools and observing laboratories in use,
6. Acquiring specific information from laboratory suppliers and other sources, e.g.:
   a. Technical data,
   b. Costs,
   c. Maintenance services provided and the conditions involved in supplying them,
   d. Supply of replacement parts, and
   e. Guarantee,
7. Ascertaining information concerning reliability of the supplying company.

B. Equipment should be durable and as simple in external and internal design as possible, and yet perform the desired functions.

C. Sufficient stations should be provided for each student in the language department's largest class.

D. The language laboratory should be located in the center of, or adjacent to, the language classrooms.

II. Maintenance

A. General

1. Prompt, reliable maintenance must be readily available from a competent and dependable source. This is often best assured by arranging a contract with the repair service. Suggested conditions of the contract are found in Section III, page 44.

2. Clear-cut lines of responsibility for maintaining the equipment (before and after breakdowns) must be established. Assignment of duties and responsibilities, the manner of reporting problems, and other such details must be clearly understood by all concerned. It is desirable to designate a teacher as laboratory director.

3. Student discipline must be controlled in the laboratory at all times. Students must know what they may and may not do, and teachers must make certain that the students adhere to the rules of proper decorum.

B. Preventive

1. Periodic checks should be made by the regular laboratory maintenance man who is a specialist in language laboratories.

2. The laboratory director or a teacher should make minor non-electronic repairs.

3. Spare headsets, microphones, and other easily interchangeable parts should be kept on hand to prevent the laboratory or part of the laboratory from needlessly becoming inoperative.

4. Homeroom groups and classes from other departments not needing to use the equipment should not be allowed to meet in the laboratory.

III. Use

A. Adequate training of teachers who use the equipment is basic for success. Learning to push the right buttons is important, but it is only one aspect of this training. Basic techniques of instruction to which laboratory work can be complementary must be understood and utilized. These basic techniques should include emphasis on oral as well as on written skills; otherwise, the contribution of the language laboratory will be negligible.

B. The texts, tapes, disc recordings, and other teaching materials must be compatible with the techniques described in the

foregoing paragraph. The supply of these teaching materials must be adequate and readily available for use.

C. The equipment should be available often enough to make a lasting contribution to the students' language learning process. Frequent laboratory sessions of short duration are usually preferable to longer periods that are infrequent.

D. All work should be introduced in the classroom before it is presented in the laboratory. The laboratory is a teaching aid, not a teaching machine.

E. Monitoring of students is essential.

F. A teacher who is familiar with laboratories and laboratory usage should be named to assist with matters such as:

1. Scheduling,
2. Maintenance and/or the acquisition of service, and
3. Orientation of new teachers.

APPENDIX A

Language Laboratory Survey

1. Do you have any language laboratories in your schools? Yes_____ No_____
2. If you plan any laboratory installations in the near future, will they most likely be: electronic classrooms?_____
   booth-type labs?_____
3. Would you like any assistance with laboratory planning or usage? Yes_____ No_____
   (If the answer to question one (1) was negative, you need not read further.)
4. Please complete the following, continuing on the reverse side if necessary:

School	No. of electronic classrooms	Portable or stationary console (circle P or S)	No. of booth-type labs	Brand of equipment	No. of positions	No. of tape recorders in student positions	No. of disc recorders in student positions	No. of tape decks in the console	No. of record players in the console	Used daily, weekly, rarely?	Are your labs used exclusively as labs?	Is one person designated as lab director? (Please name)
_____	_____	P S	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	P S	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	P S	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	P S	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

5. Do you have any comments concerning your laboratories? In particular, we would be interested in any problems you have had with your equipment, any reasons for being satisfied with it or a statement concerning its effect on your language program.

_____

_____

6. Would you have any advice to offer to others who might be considering the installation of a language lab?

_____

_____

APPENDIX B

Glossary

Audio-active laboratory, any type of laboratory in which students may receive through individual headsets the program from the console, speak into a microphone, and hear themselves simultaneously through their headsets.

Audio-active-record laboratory, identical to the audio-active laboratory except that students can also record their voices on individual tape or disc recorders built into the laboratory.

Audio-passive laboratory, a laboratory in which the students' only capability is to receive through individual earphones the program from the console.

Booth-type laboratory, a combination of a stationary console and wiring to headsets within individual student booths. Student booths may contain from 0 to 35 tape and/or disc recorders.

Console, the teacher's laboratory control panel and programing source. It may be permanently affixed or it can be mounted on casters to provide portability. It usually contains a minimum of one tape deck and one record player as well as the switches for all functions contained.

Disc recorder, a record player-recorder for the student's booth which utilizes a flexible magnetic disc on which the student may record his voice and hear it played back.

Electronic classroom, a combination of a console, which may be portable or stationary, and headsets for a full class of students. Wiring is permanently affixed within raceways, to student desks, to the floor, under the floor, around the wall, or suspended from the ceiling. The basic characteristic which distinguishes the electronic classroom from the booth-type laboratory is that the former has no booth or otherwise encumbering furniture.

Headsets, the receiving earphones or a combination of earphones and microphone.

Language laboratory, a general term used for several types of laboratories including the booth-type laboratory, the electronic classroom, the wireless laboratory and the portable laboratory. It does not include individual tape recorders or tape recorders connected to headsets by wires and junction boxes, unless the combination is extensive enough to allow an entire class of students to participate simultaneously during the regular instructional period.

Magnetic disc, a reusable, flexible, magnetic disc used in student booths for recording and playing back student voices.

Monitoring, the process which the teacher uses to listen to or communicate with individual students in the language laboratory.

Portable console, a console on casters which may be shared by two or more electronic classrooms.

Portable laboratory, a self-contained unit consisting of a console, wiring, and headsets for a minimum of 6 and a maximum of 30 students. No wiring is affixed to the room or the furniture.

Raceway, a partition approximately 30 inches high by 10 inches wide by 25 feet long for the purpose of housing the wiring and headsets in some electronic classrooms.

Station, the space and equipment provided for an individual student.

Student position, the space and equipment provided for an individual student.

Wireless laboratory, an electronic classroom in which there are no wires connecting the console to the individual headsets. Headsets are powered by batteries contained therein. A wire loop circling the room prevents the broadcast from going beyond the room.